Lake Jackson Lake Vegetation Index Results (7-30-2014)

The Lake Vegetation Index (LVI) is a multimetric index that evaluates how closely a lake's plant community resembles one that would be expected in a condition of minimal human disturbance. It is based on a rapid field assessment of aquatic and wetland plants as indicators of various effects of human disturbance over time. Plants respond to physical disturbances such as introduction of exotic species or lakeshore alterations, and chemical disturbance such as introduction of excess nutrients, particulates, or herbicides from the surrounding land uses.

The LVI method is performed from a boat, and involves dividing a lake into 12 units and identifying plants in 4 of the 12 units. Plants are identified in the selected unit by a visual boat "drive by" and also via a transect approach. The resulting data is used to calculate the LVI and is evaluated according to the scoring system in Table 1.

TABLE 1. Category names, ranges of values for LVI, and example descriptions of biological conditions typically found for that category.

Aquatic life use category	LVI Range	Description
Exceptional	78–100	Nearly every plant present is a species native to Florida, invasive taxa typically not found. About 30% of taxa present are identified as sensitive to disturbance.
Healthy	43–77	About 85% of plant taxa are native to Florida; invasive taxa present. Sensitive taxa have declined to about 15%.
Impaired	0–42	About 70% of plant taxa are native to Florida. Invasive taxa may represent up to 1/3 of total taxa. Less that 10% of the taxa are sensitive.

The Lake Vegetation Index score for Lake Jackson was 52, placing the lake's vegetative community in the healthy category.

Forty five species were found during the survey. The native species, fanwort (*Cabomba caroliniana*), and fragrant waterlily (*Nymphaea odorata*), and the Category II Invasive Exotic species alligator weed (*Alternanthera philoxeroides*), were the most dominant species in the lake. Other native vegetation included; red maple (*Acer rubrum*), buttonbush (*Cephalanthus occidentalis*) and maidencane (*Panicum hemitomon*).

Unfortunately, Chinese tallow tree (*Sapium sebiferum*), wild taro (*Colocasia esculenta*), torpedo grass (*Panicum repens*), water hyacinth (*Eichhornia crassipes*), and water spangles (*Salvinia minima*), all listed as Category I Invasive Exotics by the Florida Exotic Pest Plant Council were found in Lake Jackson. Alligator weed (*Alternanthera philoxeroides*) is a Category II Invasive Exotic found in the lake. Additionally, the exotic vaseygrass (*Paspalum urville*) was also found in and near the lake.

For a complete list of plants found during the LVI survey, please see Table 2.

TABLE 2. Scientific and common names of the plants identified during the Lake Jackson LVI survey (9-9-14).

Scientific Name	Common Name
Acer rubrum	red maple
Alternanthera philoxeroides(II)	alligator weed
Ampelopsis arborea	peppervine
Andropogon virginicus	broomsedge bluestem
Baccharis halimifolia	eastern Baccharis
Bacopa caroliniana	lemon Bacopa
Bidens alba	beggarticks
Brasenia schreberi	watershield
Cabomba caroliniana	fanwort
Celtis laevigata	sugar hackberry
Centella asiatica	spadeleaf
Cephalanthus occidentalis	buttonbush
Ceratophyllum demersum	coontail
Colocasia esculenta (I)	wild taro
Cyperus sp.	flatsedge
Diospyros virginiana	common persimmon
Echinochloa walteri	coast cockspur grass
Eichhornia crassipes (I)	water hyacinth
Eleocharis baldwinii	road-grass
Eleocharis robbinsii	Robbins' spikerush
Eriocaulon decangulare	ten-angled pipewort
Eupatorium capillifolium	dogfennel
Fuirena scirpoidea	southern umbrella sedge
Hibiscus moscheutos	crimson-eyed rosemallow
Hydrocotyle sp.	water pennywort
Hydrolea quadrivalvis	waterpod
Ipomoea sp.	morning glories
Juncus effusus	common rush
Leersia hexandra	southern cutgrass
Limnobium spongia	frog's bit
Liquidamber styraciflua	American sweetgum
Ludwigia sp.	primrose willow
Ludwigia arcuata	needleleaf Ludwigia
Ludwigia suffruticosa	shrubby primrose willow
Luziola fluitans	southern watergrass
Mayaca fluviatilis	stream bogmoss
Myrica cerifera	wax myrtle
Myriophyllum heterophyllum	twoleaf watermilfoil
Nelumbo lutea	American lotus

Nitella sp.	brittlewort
Nuphar sp.	spatterdock
Nymphaea odorata	fragrant waterlily
Nymphoides aquatica	banana lilly
Nyssa aquatica	water tupelo
Nyssa sylvatica var. *biflora*	swamp tupelo
Panicum hemitomon	maidencane
Panicum repens(I)	torpedo grass
Paspalum urvillei	vaseygrass
Pinus taeda	loblolly pine
Polygonum densiflorum	denseflower knotweed
Polygonum hirsutum	hairy smartweed
Polygonum punctatum	dotted smartweed
Pontederia cordata	pickerelweed
Potamogeton illinoensis	Illinois pondweed
Quercus nigra	water oak
Quercus virginiana	southern live oak
Ricciocarpus natans	purple-fringed Riccia
Rubus trivialis	southern dewberry
*Rumex*sp.	dock
Sacciolepis striata	American cupscale grass
Sagittaria filiformis	threadleaf arrowhead
Salix carolina	coastal plain willow
Salix nigra	black willow
Salvinia minima(I)	water spangles
Sambucus canadensis subsp. *nigra*	American elderberry
Sapium sebiferum(I)	Chinese tallow tree
Scirpus cubensis	burhead sedge
Scirpus cyperinus	woolgrass
Sesbania punicea(II)	rattlebox
Smilax sp.	greenbrier
Solidago fistulosa	pine barren goldenrod
Taxodium ascendens	pond cypress
Utricularia floridana	Florida yellow bladderwort
Utricularia biflora (U. gibba)	humped bladderwort

I - Category I Invasive Exotics

For additional information about the LVI please review the Florida Department of Environmental Protection's LVI Primer document.

For more detailed information about the above species, please visit the Atlas of Florida Vascular Plants website.

For additional information about Category I and II invasive exotic plants, please visit the Florida Exotic Pest Plant Council webpage.